



2006 Conference General Sessions

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ACCESSIBILITY OF eLEARNING IN POSTSECONDARY EDUCATION: STUDENT AND FACULTY PERSPECTIVES

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The Adaptech Research Network <<http://www.adaptech.org>> is currently conducting a three-year empirical investigation that focuses on the accessibility of eLearning to students with various disabilities, including learning disabilities, in Canadian postsecondary institutions. This study defines eLearning broadly to include all information and communication technologies, such as PowerPoint, CD-ROMs and the Internet, that professors use in their classroom and online courses. As colleges and universities increasingly employ eLearning tools to enhance teaching and learning, it becomes essential that these technologies are evaluated to ensure they are accessible to all students.

Our research subscribes to the belief that in order to fully investigate and address accessibility of eLearning in higher education, it is necessary to understand the issues from the perspectives of the student(s) with a disability, faculty, the campus-based professionals who provide disability-related accommodations to students, and the individuals who play a role in supporting/ implementing eLearning at the institution.

OBJECTIVES OF THE RESEARCH

By examining current and foreseen eLearning initiatives in Canadian universities, colleges and postsecondary distance education institutions our research: (1) identifies barriers and facilitators for students with different disabilities; and (2) helps develop best practices guidelines for the Canadian higher education community and the postsecondary publishing industry.

Key research questions include:

- * What eLearning initiatives and technologies currently exist, or are foreseen for the next 5 years?
- * How accessible will these technologies be to students with disabilities?
- * What eLearning accommodations are presently being made for people with disabilities?
- * What is the level of awareness about the accessibility of eLearning among the following groups: students with disabilities, faculty, postsecondary eLearning professionals, the publishing industry, and disability service providers
- * Do colleges and universities differ in the accessibility of their eLearning courses and programs?
- * Do French and English institutions differ in the accessibility of their eLearning courses and programs?
- * What are the specific barriers?
- * What are good solutions?

THREE RESEARCH PHASES

In Phase I, completed in the spring of 2005, 22 key informant interviews were completed with: six students with various disabilities, three faculty, five individuals who provide disability-related accommodations on campus, six individuals who support/implement eLearning on campus, and two vendors of eLearning material to the higher education community.

The aim of the key informant interviews was to gain a broad perspective about:

- * the eLearning technologies currently used on Canadian campuses;
- * the benefits and drawbacks of eLearning for students with disabilities;

* the specific accommodations involving eLearning provided by campus-based disability service providers; and

* the stakeholders involved in eLearning.

Phase II, well underway at the time of submission of this paper (i.e., Fall 2005), involves administering four web-based surveys to 80 participants representing the following four stakeholder groups:

1. college and university students with disabilities who have taken at least one course in the last three years where the professor used some form of eLearning;
2. college and university professors who have taught at least one student with a disability during the last three years in a course where they used some form of eLearning;
3. staff who provide disability-related services at Canadian postsecondary institutions;
4. individuals who support/implement eLearning at Canadian postsecondary institutions, including VPs and managers of distance education and instructional technology departments; persons who train faculty to use technology or multimedia; designers and developers of eLearning on campus.

To reflect the Canadian experience, we are sampling both English and French-speaking individuals from colleges and universities across the country. Questions are based on data collected in Phase I. The questions are primarily closed ended and use Likert-type scales (e.g., strongly disagree to strongly agree).

The survey for students with disabilities is collecting data including: demographic information; impairment/disabilities information; adaptive hardware/software used; accessibility ratings of eighteen specific types of eLearning (e.g., course web pages, PowerPoint in the classroom); and benefits, problems and solutions interacting with eLearning.

Data collected from professors and other non-student participants includes: their accessibility ratings of eighteen types of eLearning (e.g., course web pages, PowerPoint in the classroom) to students who fall into five broad categories of impairments/disabilities (totally blind, low vision, Deaf/hearing impairment, learning disability/ADD/ADHD, mobility/neuromuscular impairment); overall experiences and views about computer technologies and eLearning at their institutions; and a series of "actual" versus "desired situation" questions relative to their role in ensuring the accessibility of eLearning to students with disabilities. As the title of our paper suggests, we will discuss Phase II findings from the student and professor groups.

Phase III will be conducted in 2006. During this phase the questions will be refined and the survey will be administered to larger, more representative samples from each of the four stakeholders identified in Phase II.

PRELIMINARY FINDINGS

Results of Phase I indicate that course / learning management systems (content management systems) such as WebCT (tm) and Blackboard (tm) were the most common eLearning technologies used by Canadian postsecondary institutions. Other popular eLearning technologies include (in order of popularity): class presentations using software such as PowerPoint; downloadable course related files in PDF, Word, Excel, and HTML; course web pages; and email discussion lists / web-based threaded discussions / bulletin boards.

In general, the most accessible eLearning technologies included: course / learning management systems; downloadable Word, Excel, and HTML files; and course web pages. Accessibility of other forms of eLearning depended on the nature of students' disabilities. For example, PowerPoint files were cited as problematic by a JAWS using respondent. A campus-based disability service provider noted that timed online quizzes posed difficulties for students requiring extra time.

ABOUT THE DISABILITY AND INFORMATION TECHNOLOGY RESEARCH ALLIANCE (Dis-IT)

Our eLearning research represents one of four themes of the Disability and Information Technology Research Alliance (Dis-IT). The Alliance consists of over thirty researchers and partner organizations who are examining ways to assure that Canadians with disabilities can be part of the innovations and emerging information technologies of the emergent knowledge-driven economy. The other themes Dis-IT examines include: workplace, retail and public services, and e-democracy. Overarching issues being investigated across these four themes are:

1. How can emerging information technologies be more inclusive of the needs of people with disabilities in Canada?
2. How can more inclusive information technologies enable greater participation of people with disabilities in Canadian society and economy?
3. How can information technologies developed or adapted to address the accessibility requirements of people with disabilities also address the needs of citizens, workers, learners, and consumers in broader domestic and international markets?

For more information about Dis-IT go to <http://www.dis-it.ca>

ABOUT THE ADAPTECH RESEARCH NETWORK

For over eight years, the Adaptech Research Network has been conducting bilingual national and

provincial research studies involving college and university students with disabilities, including students with learning disabilities in Canada. All projects are informed and guided by consumer, academic, industry, community and other stakeholders as required.

One of our primary focuses has been looking at issues and experiences these students face when attempting to access or interact with computer technologies. Two common themes throughout our research coming from postsecondary students with disabilities has been the high-cost associated with and lack of knowledge about adaptive hardware and software. To help address these needs, we make available a library of free or inexpensive software downloads from our site that students and others can try out and use. We are continually evaluating and adding new titles in categories such as cursor enhancement, word prediction and text-to-speech software. These in no way are meant to replace the more sophisticated and function-rich adaptive products currently available, however these provide alternatives and options.

To learn more about us, to express interest in getting involved or to access our 'Downloads' library, visit us at <http://www.Adaptech.org>

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